



City of Carmel Utilities

Jim Brainard, Mayor

2006 Annual Water Quality Report



CITY OF CARMEL

WATER-WASTEWATER UTILITIES

What is a drinking water report and why did I get one?

As required by the U.S. Environmental Protection Agency (EPA), this drinking water report provides information on where water comes from and how it compares to current standards. If after reading this report you have any questions or concerns, please contact us at 317- 571 -2443.

On July 1, 2006, Carmel Utilities acquired all customers owned by Indianapolis Water in the Carmel/Clay Township service area. Carmel Utilities immediately began providing customer service functions such as meter reading, billing, and water distribution system maintenance and repair. However treatment of your water prior to it reaching your home or business is still being provided by the Indianapolis Water treatment facilities. The data and information in this report was provided to Carmel Utilities from Indianapolis Water.

Where does my water come from?

IW's water supply for its customers comes from several sources:



- White River supplies two of the four surface water treatment plants, White River and White River North. Morse Reservoir, near Noblesville, stores water to assure a dependable supply in White River to these plants.
- Fall Creek is another surface water supply. Geist Reservoir stores water to assure an adequate supply in Fall Creek for the Fall Creek Treatment Plant.
- Also, a number of wells are used intermittently to supplement the supplies to the White River, White River North and Fall Creek plants.
- IW also receives some surface water from Eagle Creek Reservoir, which supplies water to the T.W. Moses treatment plant.
- IW presently has four ground water stations that serve smaller portions of its service area. These are: Geist Station, Harding Station, South Well Field and Ford Road Plant. These ground water stations treat water pumped from underground water sources called aquifers.

What's the difference between surface water and ground water?

Surface water comes from rivers, creeks, streams and reservoirs and may potentially have more pollutants and contaminants than ground water. Ground water comes from below the surface, typically from wells drilled deep into the ground. Ground water may have more mineral deposits than surface water.

More information about contaminants and potential health effects can be obtained by calling EPA's Safe Drinking Water Hotline at 800-426-4791, or via the web at www.EPA.gov.

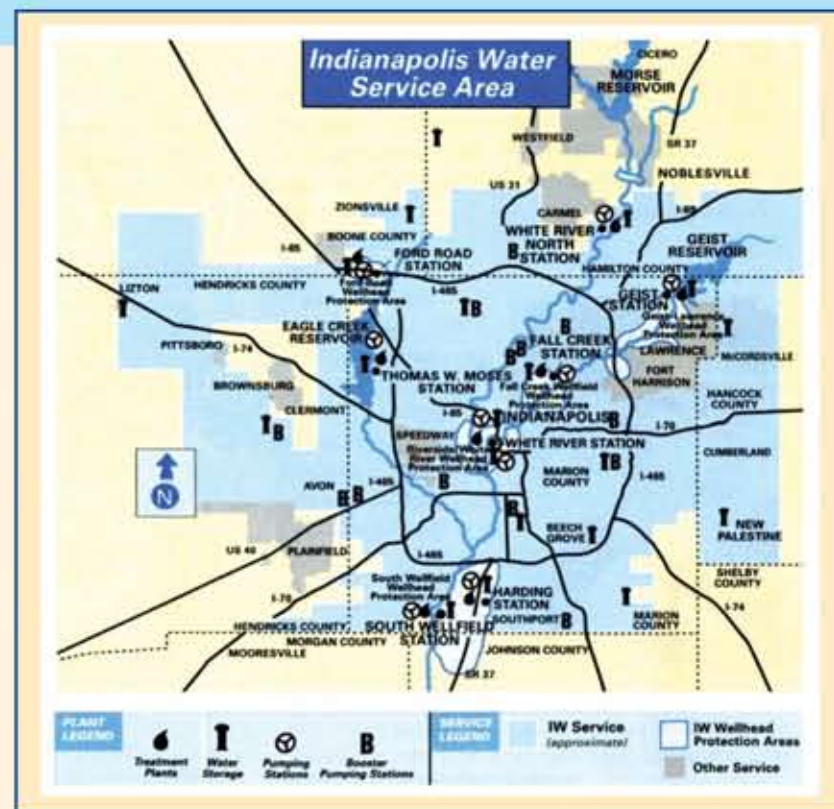
What's in my drinking water before it is treated?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and pick up substances resulting from the presence of animals or human activity.

Contaminants that may be present in source water (rivers, lakes, streams, ponds, reservoirs, springs and wells) include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural live stock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproduct of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA)



regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily pose a health risk.

Indianapolis Water 2006 Treated Drinking Water data

Substances we detected	MCLG What's the goal	MCL What's allowed	System Wide Results - Levels found in your drinking water	Compliance Achieved	Possible Source Where did it come from?
Arsenic (ppb)	0 ppb	10 ppb	ND	Yes	Natural Deposits
Atrazine (ppb)	3 ppb	3 ppb*	0.34 annual average (range: ND - 6.0)	Yes	Herbicide Runoff
Barium (ppm)	2 ppm	2 ppm	range: 0.03 - 0.22	Yes	Natural Deposits
Chromium (ppb)	100 ppb	100 ppb	range: ND - 9.3	Yes	Natural Deposits
Dalapon (ppb)	200 ppb	200 ppb	range: ND - 1.8	Yes	Herbicide Runoff
Di(2-ethylhexyl) phthalate (ppb)	0 ppb	6 ppb	range: ND - 2.5	Yes	Sample contact with plastics
Fluoride (ppm)	4 ppm	4 ppm	range: 0.32 - 1.99	Yes	Natural Deposits & Treatment Additive
HAA-5 ♦ (ppb)	0 ppb	60* ppb*	41.4* (range: 1.6 - 80.1)	Yes	By-Product of Chlorination Treatment
TTHM ♦ (ppb)	0	80* ppb*	47* (range: 6.8 - 85.3)	Yes	By-Product of Chlorination Treatment
Turbidity (TT)▲	NA	1.0 NTU	range: 0.05 - 0.25	Yes	Soil Runoff
Turbidity (TT)▲	NA	95% < 3.0 NTU	100% Lowest Month System Wide	Yes	Soil Runoff
2,4-D (ppb)	70 ppb	70 ppb	ND - 0.59	Yes	Herbicide Runoff
Nitrate (ppm)	10.0 ppm	10.0 ppm	ND - 3.4	Yes	Fertilizer, Septic Tank Leachate
Simazine (ppb)	4 ppb	4 ppb	ND - 1.3	Yes	Herbicide Runoff
Total Organic Carbon	NA	Report removal	range: 1.92-3.51 ppm	Yes	Natural organic matter partially removed in the coagulation treatment process to reduce formation of TTHMs and HAAS
Selenium	50 ppb	50 ppb	ND - 2.8 ppb	Yes	Natural Deposits; Mine/Refinery discharge
Nickel ■	NA	none	8.4 ppb	NA	NA
Sodium ■	NA	none	47 ppm (range: 8-83 ppm)	NA	NA
Sulfate ■	NA	none	140 ppm	NA	NA
pH (standard units) ■	NA	none	7.01 - 7.57	NA	NA
Calcium ■	NA	none	95 (range: 59-106 ppm)	NA	NA

Test results taken directly from the Carmel area

Chlorine (MRDL)	NA	4.0 ppm	range: 0.08 - 2.20	Yes	Disinfectant & Treatment Additive
Copper (AL)	1.3 ppm	1.3 ppm	90th percentile 1.090 ppm	Yes	Corrosion of Customer Plumbing
Lead (AL)	0	15 ppb	90th percentile 7 ppb	Yes	Corrosion of Customer Plumbing
Total Coliform	0	5%	0	Yes	Naturally Present in Environment

KEY: ND - Not detected NA - Not applicable ♦ Haloacetic Acids ♦ Trihalomethanes ▲ Treatment Technique measured in Turbidity Units (NTU)
+ Flow weighted * Annual average ■ Unregulated contaminant

Important Definitions What do these terms mean?

MCLG – Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MCL – Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
MRDL – Maximum Residual Disinfectant Level: The highest level of the disinfectant allowed in drinking water. There is convincing evidence that the addition of disinfectant is necessary for control of microbial contaminants.
Flow Weighted: Based on the amount of water produced by each plant.

AL- Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
TT – Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
Turbidity: The measure of cloudiness of water. IW monitors turbidity as it is a good indicator of the effectiveness of the filtration system.
ppm – One part per million
ppb – One part per billion
Finished Water: Water that has been treated through a drinking water treatment plant and provided to the distribution system for delivery to customers.

What does this chart mean? The chart below gives you a quick look at some of the substances that the EPA requires us to test for. You'll notice that the contaminant is listed to the left, followed by the maximum amount allowed by regulations and then the amount that we found in our water. The tests are done on treated, or "finished," water.

Monitoring Requirements Not Met in 2006

We are required to monitor your drinking water for specific contaminants on a regular basis. The results of regular monitoring are an indicator of whether or not our drinking water meets health standards. On four occasions in 2006, online turbidimeters for individual filters did not accurately collect and record turbidity data at the Fall Creek, White River and White River North treatment plants. On each occasion, the turbidity of the water leaving the plant was within turbidity standards according to combined filter readings.

What should I do?

There is nothing you need to do at this time.

What happened and what has been done?

Data was not accurately collected when an online turbidimeter failed to reset after a brief power outage at the Fall Creek plant. On separate occasions, the devices were not configured correctly to record individual filter turbidity at the White River and White River North Treatment plants. All turbidimeters have been inspected and tested, including the ones on which individual filter turbidity data was not recorded on in 2006 at the Fall Creek, White River, and White River North plants. In addition, an enhanced alarm system is now in place.

For more information, please contact Carmel Utilities at 317-571-2443.

Customer Service Hours: Monday through Friday 8 a.m. until 5 p.m.

Telephone: 317-571-2442

Information about Carmel Utilities can be found on the web at www.carmel.in.gov.



How is water treated?
Ground water treatment plants aerate and filter water to remove dissolved iron and manganese. Chlorine is added to destroy any bacteria present and to maintain a level of disinfectant as the water travels through the distribu-

tion system. Fluoride is added to help strengthen resistance to cavities in teeth. A small amount of ammonia is used to minimize byproducts of the disinfection process and to allow chlorine to persist longer in the distribution system. For a few weeks each year, when the water temperature is cool, no ammonia is added in order to help maintain good microbial water quality in the distribution system. This chlorine residual without ammonia know as "free chlorine" is a more active form of chlorine. The "free chlorine" has a more noticeable bleach or chlorine taste with the same level of chlorine.

What if I have special health considerations?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons, such as persons undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The EPA and Centers for Disease Control and Prevention (CDC) offer guidelines on appropriate means to lessen the risk of infection by cryptosporidium, other microbial contaminants and information about contaminants and potential health effects are available from the EPA's Safe Drinking Water Hotline at 800-426-4791 or www.EPA.gov.

What is Cryptosporidium?

Cryptosporidium is a microscopic organism that lives in the intestines of animals and people. When ingested, this microscopic pathogen may cause a disease called cryptosporidiosis, which has flu-like symptoms. Although there has been no cryptosporidium found in treated finished drinking water, cryptosporidium is found in source water such as White River, Fall Creek, and Eagle Creek Reservoir.

IW utilizes a stringent monitoring program, testing source water and finished drinking water as well as using online monitors that measure the clarity of the water, which helps determine the likeliness of the microbe's presence in the drinking water. At the surface water treatment plants, physical removal by coagulation, flocculation, sedimentation and filtration is used to eliminate the pathogen from drinking water

What's being done to improve water quality?

Wellhead protection. In order to minimize the risk of ground water contamination, IW and Carmel Utilities in accordance with the State Wellhead Protection Rule and local ordinances has implemented a Wellhead Protection Program. This program involves working with local planning teams and regulators, mapping of the wellhead protection areas, identifying potential sources of ground water contamination, working with businesses to prevent spills and releases of chemicals, and preparing a contingency plan in case of contamination. For more information, call Carmel Utilities at 317-571-2443.

Source Water Assessments. An inventory of identified potential sources of contamination upstream of each surface water treatment facility has been conducted by the United States Geological Survey for the Indiana Department of Environmental Management. These assessments are a helpful component in IW's and Carmel Utilities overall source water protection strategy. For more information, call IW at 317-571-2443.

Is there lead in my drinking water?

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that the lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about the elevated lead levels in your home's water, you may wish to have your water tested. Also flush your tap for 30 seconds to two minutes before using tap water. Additional information is available from the EPA's Safe Drinking Water Hotline at 800-426-4791 or www.EPA.gov.

How hard is my water?

As is common with water in this region, IW water is considered hard due to the natural levels of minerals calcium and magnesium. The water hardness, expressed as calcium carbonate, typically ranges from around 200 to 350 milligrams per liter or parts per million (ppm). This equates to 12 to 20 grains per gallons (the measure often referred to in determining water softener settings). Water hardness can vary depending on the hardness of the source water that is used to supply different treatment plants. More specific information about the water hardness typical at your address can be obtained by calling 317-571 -2443.

